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Applicant IMCLONE SYSTEMS INCORPORATED et al			

The International Bureau transmits herewith the following documents:

- ☐ copy of the international application as published by the International Bureau on under No. WO
- ☒ copy of international application as republished by the International Bureau on 21 April 2005 (21.04.2005) under No. WO 2005/016970
For an explanation as to the reason for this republication of the international application, reference is made to INID codes (15), (48) or (88) (as the case may be) on the front page of the attached document.

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AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: FULLY HUMAN ANTIBODIES DIRECTED AGAINST THE HUMAN INSULIN-LIKE GROWTH FACTOR-1 RE-
CEPTOR

(57) Abstract: This invention relates to human antibodies that bind to human insulin-like growth factor-1 receptor (IGF-IR), to derivatives of these antibodies (Fabs, single chain antibodies, bi-specific antibodies, or fusion proteins), and to uses of the antibodies and derivatives in therapeutic, and diagnostic methods. The invention relates to nucleic acids encoding the anti-IGF-IR, methods of generating the antibodies and expression. The invention further relates to combination therapies using anti-IGF-IR antibodies with anti-neoplastic drugs.



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INTERNATIONAL SEARCH REPORT

International Application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K16/28 A61K39/395 A61P35/00 C12N15/13 C12N15/63
C12N5/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, EMBASE, PAJ, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/053596 A (PFIZER INC; ABGENIX, INC; COHEN, BRUCE, D; BEEBE, JEAN; MILLER, PENELO) 11 July 2002 (2002-07-11) examples 4,11,12	1-56
E	WO 2004/087756 A (F. HOFFMANN-LA ROCHE AG; GRAUS, YVO; KOPETZKI, ERHARD; KUENKELE, KLAUS) 14 October 2004 (2004-10-14) page 43; example 2	1-56
E	WO 2004/083248 A (PHARMACIA CORPORATION; MORTON, PHILIP, A; ARBUCKLE, J., ALAN; BAILEY,) 30 September 2004 (2004-09-30) examples 3,4	1-56
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

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P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

14 February 2005

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10/03/2005

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/013852

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 2004/071529 A (PFIZER PRODUCTS INC; COHEN, BRUCE, DAVID; BEDIAN, VAHE; WANG, HUIFEN,) 26 August 2004 (2004-08-26) page 17 - page 18	1-56
P,X	WO 03/100008 A (SCHERING CORPORATION; WANG, YAN; GREENBERG, ROBERT; PRESTA, LEONARD; P) 4 December 2003 (2003-12-04) page 69	1-56
A	HAILEY J ET AL: "NEUTRALIZING ANTI-INSULIN-LIKE GROWTH FACTOR RECEPTOR 1 ANTIBODIES INHIBIT RECEPTOR FUNCTION AND INDUCE RECEPTOR DEGRADATION IN TUMOR CELLS" MOLECULAR CANCER THERAPEUTICS, AMERICAN ASSOCIATION OF CANCER RESEARCH, US, vol. 1, no. 14, December 2002 (2002-12), pages 1349-1353, XP008026465 ISSN: 1535-7163 the whole document	1-56
A	VAUGHAN T J ET AL: "HUMAN ANTIBODIES WITH SUB-NANOMOLAR AFFINITIES ISOLATED FROM A LARGE NON-IMMUNIZED PHAGE DISPLAY LIBRARY" NATURE BIOTECHNOLOGY, NATURE PUBLISHING, US, vol. 14, 1 March 1996 (1996-03-01), pages 309-314, XP000196144 ISSN: 1087-0156 the whole document	1-56
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P,A	LU DAN ET AL: "Simultaneous blockade of both the epidermal growth factor receptor and the insulin-like growth factor receptor signaling pathways in cancer cells with a fully human recombinant bispecific antibody." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 279, no. 4, 23 January 2004 (2004-01-23), pages 2856-2865, XP002316541 ISSN: 0021-9258 the whole document	1-56

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US2004/013852

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	<p>BURTRUM DOUGLAS ET AL: "A fully human monoclonal antibody to the insulin-like growth factor I receptor blocks ligand-dependent signaling and inhibits human tumor growth in vivo." CANCER RESEARCH, vol. 63, no. 24, 15 December 2003 (2003-12-15), pages 8912-8921, XP002316542 ISSN: 0008-5472 the whole document</p> <p>-----</p>	1-56

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/013852

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 34-56 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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